What is claimed is:

1. A method for fabricating a Fe-Si based thin film, comprising the steps of:

preparing a substrate of which the crystal planes are orientated perpendicular to a main surface thereof and made of the same kind of ion, and

performing film forming operation on said main surface of said substrate to epitaxially grow a Fe-Si based thin film thereon.

2. The fabricating method as defined in claim 1, wherein the difference between said substrate and said Fe-Si based thin film is set to 16% or below.

3. The fabricating method as defined in claim 2, wherein the difference between said substrate and said Fe-Si based thin film is set within –6% to 16%.

4. The fabricating method as defined in claim 1, wherein said Fe-Si based thin film is fabricated by means of RF magnetron sputtering or CVD.

5. The fabricating method as defined in claim 4, wherein said substrate is heated within 600-900°C.

6. The fabricating method as defined in claim 1, wherein said substrate is made of (100) Si, (111)Si, (100)Y_2O_3-ZrO_2, (111)Y_2O_3-ZrO_2, (001)Al_2O_3, (100)CeO_2 or (111)CeO_2.

7. The fabricating method as defined in claim 1, wherein said Fe-Si based thin film contains a crystal structure where Fe crystal planes and Si crystal planes are alternately stacked, respectively.

8. The fabricating method as defined in claim 7, wherein said substrate is made of (111)Si, (11$\bar{1}$)Y_2O_3-ZrO_2 or (111)CeO_2, and said Fe-Si based thin film is orientated commensurate with the (110)/(101) plane thereof.

9. The fabricating method as defined in claim 7, wherein said substrate is made of (100) Si, (100)Y_2O_3-ZrO_2, (001)Al_2O_3 or (100)CeO_2, and said Fe-Si based thin film is orientated commensurate with the (100) plane thereof.

10. The fabricating method as defined in claim 9, wherein said substrate is made of (100)Y_2O_3-ZrO_2, and said Fe-Si based thin film is epitaxially grown in two rotational symmetry.

11. The fabricating method as defined in claim 9, wherein said substrate is made of (001)Al_2O_3, and said Fe-Si based thin film is epitaxially grown in three rotational symmetry.

12. A method for fabricating a Fe-Si based thin film, comprising the steps of:

preparing a given substrate,

forming, on said substrate, a buffer layer of which the crystal planes are orientated perpendicular to a main surface thereof and made of the same kind of ion, and

performing film forming operation on said main surface of said buffer layer to epitaxially grow a Fe-Si based thin film thereon.

13. The fabricating method as defined in claim 12, wherein the difference between said buffer layer and said Fe-Si based thin film is set to 16% or below.

14. The fabricating method as defined in claim 13, wherein the difference between said buffer layer and said Fe-Si based thin film is set within –6% to 16%.

15. The fabricating method as defined in claim 12, wherein said Fe-Si based thin film is fabricated by means of RF magnetron sputtering or CVD.

16. The fabricating method as defined in claim 15, wherein said buffer layer is heated within 600-900°C.

17. The fabricating method as defined in claim 12, wherein said buffer layer is made of (100) Si, (111)Si, (100)Y_2O_3-ZrO_2, (111)Y_2O_3-ZrO_2, (001)Al_2O_3, (100)CeO_2 or (111)CeO_2.

18. The fabricating method as defined in claim 12, wherein said Fe-Si based thin film contains a crystal structure where Fe crystal planes and Si crystal planes are alternately stacked, respectively.

19. The fabricating method as defined in claim 18, wherein said buffer layer is made of (111)Si, (111)Y_2O_3-ZrO_2 or (111)CeO_2, and said Fe-Si based thin film is orientated commensurate with the (110)/(101) plane thereof.

20. The fabricating method as defined in claim 18, wherein said buffer layer is made of (100) Si, (100)Y_2O_3-ZrO_2, (001)Al_2O_3 or (100)CeO_2, and said Fe-Si based thin film is orientated commensurate with the (100) plane thereof.

21. The fabricating method as defined in claim 20, wherein said buffer layer is made of (100)Y_2O_3-ZrO_2, and said Fe-Si based thin film is epitaxially grown in two rotational symmetry.

22. The fabricating method as defined in claim 20, wherein said buffer layer is made of (001)Al_2O_3, and said Fe-Si based thin film is epitaxially grown

in three rotational symmetry.

23. A Fe-Si based thin film, wherein Fe crystal planes and Si crystal planes are alternately stacked, respectively.

24. The Fe-Si based thin film as defined in claim 23, which is orientated commensurate with the (110)/(101) plane thereof.

25. The Fe-Si based thin film as defined in claim 23, which is orientated commensurate with the (100) plane thereof.

26. The Fe-Si based thin film as defined in claim 25, which is orientated in two rotational symmetry.

27. The Fe-Si based thin film as defined in claim 25, which is orientated in three rotational symmetry.